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THE CENTER LINE

MONTANA HIGHWAY COMMISSION

Vol. IV., No. 9.

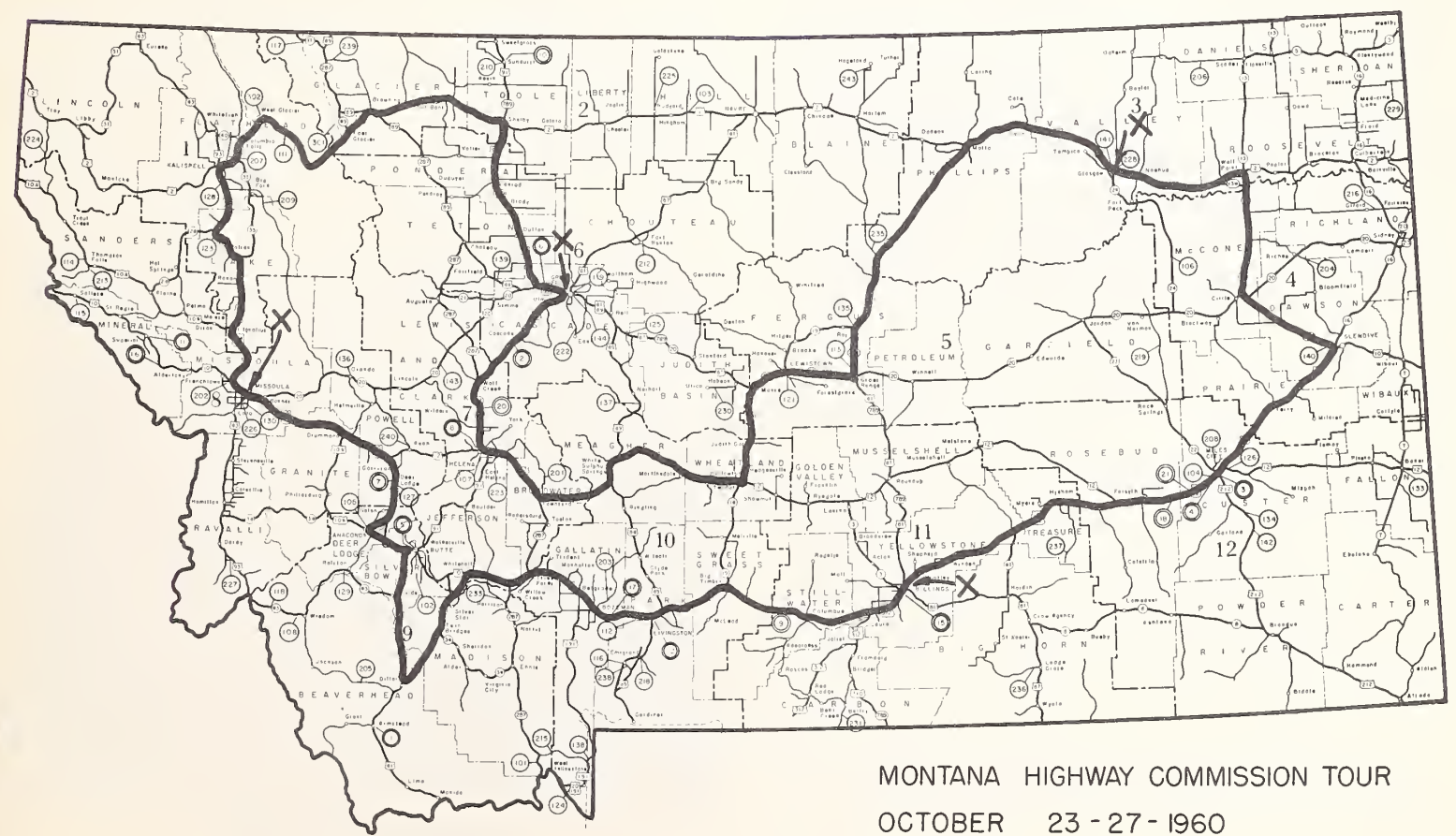
October, 1961

HIGHWAY COMMISSION TOUR

Firm believers that a look is worth a thousand words, the Montana Highway Commission departed by bus from the Highway Building on the afternoon of October 23, to take a look at some 1,600 miles of highway, plus inspecting some of the major jobs under contract, and where additional miles of new highway will be built. Before their return to Helena on October 27, they had heard descriptions of the major projects from each District Engineer, and will have looked at areas which have occupied hours of discussion in the Commission Room.

Overnight stops were planned in Great Falls, Missoula, Billings, and Glasgow, and because of the distance involved to complete the trip, very few stops could be made. The departure hour each day was set at 7:00 a. m. and there was very little time to stop along the route, in order that the schedule be maintained.

They conducted the regular business while on the bus, and on Wednesday, October 25, bids were opened in Helena, and after the IBM 650 had checked them, they were flown to the bus somewhere along the route, to be awarded.



MONTANA HIGHWAY COMMISSION TOUR
OCTOBER 23 - 27 - 1960
X - OVERNITE STOP

AWARD SHEET PROJECT NO.	AMOUNT OF BID	LETTER BIDDER	F SEPT. 27, 1961 ADDRESS
F-FG 215 (7) Higgins Ave.-Missoula Road Missoula County (Structure)	\$ 988,381.36	Sletten Construction Co.	Great Falls
R.O.W. S 6 (4) Townsend-Canyon Ferry Clasol Road Broadwater County (Fencing)	\$ 347.07	Victor Rockwell	Sun River
S 258 (4) Rock Springs-Van Norman Road Garfield County	\$ 184,266.53	The O'Neil Construction Co.	Havre
S 399 (2) Melstone-Mosby Road Petroleum County	\$ 91,866.17	Wickens Brothers	Suffolk
All Projects Awarded to Low Bidder			
Monthly Total \$ 1,264,861.13			
Total for Year \$34,356,492.83			

INTERSTATE RIGHT OF WAY COMES HIGH THROUGH THE COURTS!

At the end of the 1961 fiscal year, the Right-of-Way Division prepared a recapitulation of the accumulated costs of Interstate right-of-way up to the end of fiscal 1961.

The total cost of right-of-way up to that date was \$8,145,482.20 for land purchased and damages for the three Interstate Routes in Montana.

Broken down to routes, Route 90 Right-of-Way has taken \$4,799,263.87; Route 15, \$2,994,546.23; and Route 94, \$351,672.87.

Right-of-Way Engineer Chittim has disclosed that a total of \$6,811,947.52 was obtained through negotiation with the land owner, without resorting to the court procedure, and in cases where litigation is involved, the expenditure was \$1,333,543.68. Chittim revealed that the final amount paid through court procedure was over twice the \$640,264 offered the landowner by the negotiator.

From these figures, then, we find that when we have completed negotiations with the landowner, it has saved the highway user a considerable amount.

PLENTY OF FUTURE WORK COMING UP

As of the first of October, a total of 402.4 miles of highway were under construction in Montana. Broken down into systems, there were 105.4 miles on the Interstate, 158.6 on the Primary, 138.4 on the Secondary, and 1.087 on the Urban. The total amount of the projects, dollarwise, was \$48,118,182.

The designers have a total of 1,178 miles of future highways on the drawing boards, and another 372 miles of highway location were under way in the field.

SERVICE AWARDS

Eighty-three employees of the Department received service awards during the last three months covering a total of 885 years service. Four men, Howard E. Norris of Missoula, Don B. DeVore and Lynden Rudeck of Helena, and Kenny Lawrence received recognition for 30 years of service, while Harold Veseth of Glendive received recognition for 25 years; John W. Cyr and Thomas E. Price of Missoula, Glenn Preuninger, Elmer Strom and Lloyd Elliott of Billings, have completed 20 years of service. Congratulations, fellows!

DRIVING EMERGENCIES

Here are some driving emergencies and suggestions on how to handle them:

Brakes fail—Steer to and scrape along the curb, if necessary and possible.

Blow out—Apply brakes very lightly and coast to a stop.

Skid—Steer in the direction of a rear wheel skid. Apply brakes lightly. Off the road onto the shoulder—slow down before turning back onto the road.

Light change when near intersection—Stop slowly, don't slam on the brakes.

Backing—Don't trust rearview mirror, get out and look to see if anything is behind you.

Involved in an accident—Don't leave the rescue scene. Help the injured, if any, and call a doctor or ambulance. Exchange information with other party. Obtain names of witnesses. If you hit an animal, parked car, shrubbery or other inanimate object, notify the owner and/or the police. Make full reports to proper authorities.

In any situation, *keep calm and don't panic*. Retain full control of your vehicle.

—Safety Department

MISSOULA LANDMARK DOOMED

After having served the residents of Missoula and Montana for the past 53 years, the Higgins Avenue bridge will soon be replaced by a modern 4-lane structure.

Designed by Waddell and Harrington of Kansas City, Missouri, and built in 1908-09 to replace a bridge washed out in the 1908 flood, the years have begun to show in the form of spalling con-

(Continued on page 3)



The completion of this four-lane section of U. S. 10-A east from Anaconda for a distance of six miles marks is just one step in providing modern highway facilities between Butte and Anaconda. The next section of four-lane highway will extend the present four lanes to intersect with the Interstate.

MISSOULA LANDMARK DOOMED

crete and deck deterioration. The "old timers" recall that the decking was composed of wooden blocks which were adequate at the time, due to its principal duty of carrying a street car track, but since has been a never-ending maintenance problem; and, of course, the ever increasing traffic load has created a major bottle neck in this area. Under terms of the contract, Missoula County will recover all salvagable material from the structure.



Overall view of the Higgins Ave. Bridge, soon to be replaced with a modern 4-lane combination pre-stressed concrete beam and steel and concrete structure.



Upstream side of the Higgins Ave. Bridge. In the foreground is the "north" channel which will be filled, permitting part of the island and the old channel area to be reclaimed.

The new bridge scheduled for completion by June of 1963 will be a 972 foot combination pre-stressed concrete beam and steel and concrete structure. The island formed under the present bridge will be eliminated by widening the south channel and filling the north channel which will permit approximately three acres to be reclaimed.

Max H. Anderson, Resident Bridge Engineer, assisted by Warren L. Hersman, Bridge Engineer, will be in charge of the project.

NEWS FROM THE DIVISIONS

Bozeman Division

Resident Engineer Max H. Anderson is being transferred effective September 25, 1961 from the Rocky Canyon Interstate structures east of Bozeman to the Missoula Division to take charge of the Higgins Avenue Bridge construction. Max says he regrets leaving the college to go to the university, but that he understands Missoula County has elected a new sheriff and consequently feels it is safe for him to return to Missoula.

Bozeman Division Mechanic, Lorn F. Hardie, entered a Salt Lake City hospital, September 20, 1961, to undergo surgery to correct a hernia. We believe that Lorn has the most years of service with the Montana Highway Department of any man on active duty status.

Miles City Division

When Walter Mackin and Son of Billings, Montana, were awarded the contract for construction of 7,800 rods of fence on 11.6 miles of Interstate 94 from Miles City-East, their reputation as one of Montana's original constructors of quality bridges was also prevalent.



Through their creative ingenuity, the miniature "pile driver" pictured above, was constructed. This unit, mounted on a military 6x6 truck,

has 14' leads, an 1,800 pound hammer, is hydraulically leveled and very maneuverable. The efficiency of this unit has contributed to the excellent progress on this project.



Blake Mackin is superintendent for the contractor and Delmer Borer (lower right) is the project engineer for the State Highway Commission.



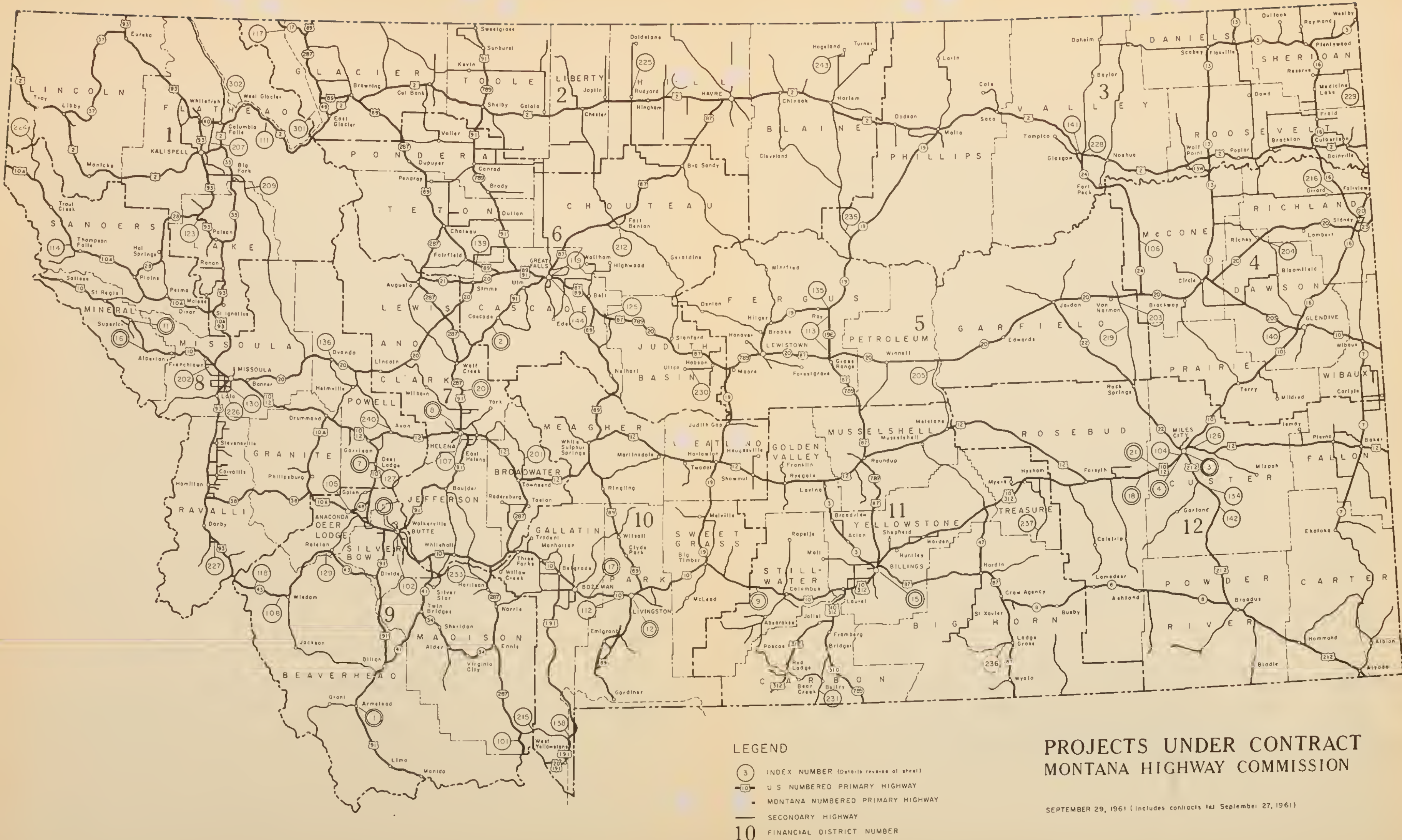
Yes, our division headquarters require maintenance also. The pictures shown are of the division offices and shop at Miles City and employee Paul Keniv, performing preventive maintenance.

Map Index Number	Project Number	Probable Completion Date	LENGTH, TYPE OF CONSTRUCTION AND LOCATION
<u>FEDERAL AID PRIMARY PROJECTS</u>			
113	F 333 (29) U 1 F 26 (6) U 1 & F 333 (27) U 1	12-29-61 12-29-61	11.8 miles cement base stabilizing, plant mix bituminous and seal coat oiling. (Montana 19 E - North of Grass Range). 11.2 miles grading, cement stabilized base, drainage, surfacing, plant mix bituminous and seal coat oiling. (Montana 19 E - Grass Range North).
	F 333 (27) U 2	12-29-61	Four prestressed concrete beam bridges . One 92 foot McDonald Creek, One 82 foot Chippewa Creek, One 92 foot Ford's Creek, One 82 foot Little Box Elder Creek . (Montana 19 E - Grass Range - North) .
114	FHP 6 D 5 *	1961	2.3 miles grading, drainage, surfacing, and road mix bituminous oiling . (U. S. 10 A relocation - West of Thompson Falls) .
117	NP 4A4 & 14A *	1961	10.9 miles grading, drainage, surfacing, and bituminous surface treatment . (Montana 17 - Northwest of East Glacier) .
118	FHP 20-B *	1961	9.4 miles grading, drainage, and four 60 foot concrete slab bridges . Three over Trail Creek and one over Ruby Creek (Montana 43 - West of Wisdom) .
119	U-F-FG 395 (4)	12-29-61	One 1126 foot steel riveted plate girder bridge - GN RY and Missouri River . (U. S. 87 - ByPass - Great Falls North) .
123	F 191 (20) U 1	12-29-61	7.3 miles (2.5 miles grading and drainage) aggregate surfacing, plant mix bituminous and seal coat oiling . (U. S. 93 - North of Polson) .
125	F 235 (27) U 1	12-29-61	5.1 miles grading, drainage, aggregate surfacing, plant mix bituminous and seal coat oiling. Three 83 foot prestressed concrete beam bridges - Otter Creek . (U. S. 87 - Southeast of Belt) .
126	F 86 (20) U 1	9-15-62	0.8 miles grading, drainage, aggregate surfacing, plant mix bituminous and seal coat oiling. (U. S. 12 - East of Miles City) .
127	F 184 (14)	12-29-61	1.1 miles grading, drainage, surfacing, plant mix bituminous and seal coat oiling . (U. S. 10 - North and South of Deer Lodge) .
129	F 43 (15) U 1	12-29-61	31.0 miles plant mix bituminous and seal coat oiling . (Montana 43 - East and West of Ralston) .
130	FAP 215 (3) F-FG 215 (7)	12-29-61 6-30-63	Traffic controls on Brooks Street, Middlesex Street, and North Avenue Intersection . (U. S. 93 - In Missoula) . 0.3 miles four lane divided, grading, drainage, aggregate surfacing, plant mix bituminous and seal coat oiling . One 972 foot steel and concrete bridge - C.M.S.T.P&P RY and Clark Fork (U. S. 93 - In Missoula) .
132	F 260 (9)	12-29-61	20,175 foot steel guard rail . (U. S. 2 - West Glacier East) .
134	F 156 (11) U 2	12-29-61	One 138 foot prestressed concrete beam bridge - Pumpkin Creek . (U. S. 212 - South of Miles City) .
135	F 103 (10) U 1 & F 333 (28)U1	7-15-62	11.5 miles grading, cement stabilized base surfacing, drainage, plant mix bituminous and seal coat oiling. Widen 57 & 75 foot treated timber bridges to 36 foot - Box Elder Creek . (Montana 19 - Roy Northeast) .
136	F 237 (16) & F 267 (11)	12-29-61	29.8 miles (intermittent raising of grading) surfacing, plantmix bituminous and seal coat oiling . (Montana 20 - West & East of Ovando) .
138	FHP 42-M2 *	1962	2.2 miles grading, drainage, aggregate surfacing and bituminous surface treatment . Widening of 105 foot Reinforced Concrete Girder Bridge - Grayling Creek . (U. S. 191 - North of West Yellowstone) .
139	F 65 (8) U 2	12-29-61	One 60 foot prestressed concrete beam bridge - Greenfields South Canal . (U. S. 89 - Southeast of Fairfield) .
140	F 246 (9) U 1	6-30-62	9.2 miles grading, drainage, aggregate surfacing, plant mix bituminous and seal coat oiling . (Montana 20 S - West of Glendive) .
141	F 144 (6)	7-30-62	4.7 miles (2.3 miles four lane divided) grading, drainage, aggregate surfacing, plant mix bituminous and seal coat oiling. One 38 foot treated timber bridge - Goudge Coulee . (U. S. 2 - Glasgow East) .
142	F 156 (10) U 1 & F 156 (11)U1	9-15-62	13.2 miles grading, drainage, surfacing, plant mix bituminous surfacing . (U. S. 212 - Southeast of Miles City) .
144	F 180 (4) & U 277 (5)	12-29-61	3.2 miles minor grading, aggregate surfacing, plant mix bituminous and seal coat oiling . (U. S. 87 & 89 - In Great Falls) .
<u>FEDERAL AID SECONDARY PROJECTS</u>			
201	ROW S 6 (4)	10-1-62	0.3 mile fencing (North of Townsend) .
	S 6 (4)	9-15-62	7.0 miles grading, drainage, aggregate surfacing, plant mix bituminous and seal coat oiling . (North of Townsend) .
202	S-SG 272 (2)	12-29-61	1.7 miles aggregate surfacing, plant mix bituminous and seal coat oiling . (Southeast of Frenchtown) .
203	S 258 (4)	10-1-62	7.8 miles grading, drainage and aggregate surfacing (Junction Montana 20 East Van Norman South) .
204	S 32 (11)	12-29-61	7.4 miles grading, drainage, surfacing, plant mix bituminous and seal coat oiling . (Richey Northwest & Southeast) .
205	S 399 (2)	7-31-62	1.0 mile grading, drainage and aggregate surfacing . One 132 foot prestressed concrete beam bridge - Flatwillow Creek (North of Melstone) .
207	S 7 (6) U 1	12-29-61	6.5 miles (1.9 miles four lane divided) grading, drainage, aggregate surfacing, plant mix bituminous and seal coat oiling . (East of Kalispell) .
209	S 65 (4)	12-29-61	4.9 miles grading, drainage, surfacing, plant mix bituminous and seal coat oiling . (Southeast of Big Fork) .
212	S 290 (12)	7-30-63	1.7 miles grading, drainage, aggregate surfacing, plant mix bituminous and seal coat oiling . One 708 foot riveted plate girder bridge - Missouri River . (Fort Benton Southeast) .
215	ERFO 40 (1) *	1961	3.8 miles grading . (Through Earthquake Slide - Southeast of Ennis) .
216	S 361 (1)	12-29-61	5.5 miles grading, drainage, surfacing, plant mix bituminous and seal coat oiling . (East of Girard) .
219	S 258 (3)	12-29-61	6.7 miles grading, drainage, and aggregate surfacing . (North of Rock Springs) .
224	FHP 5-2 (1) *	1961	4.7 miles grading and drainage . (South of Troy) .
225	S 13 (5)	12-29-61	5.3 miles grading, drainage, aggregate surfacing, plant mix bituminous and seal coat oiling . (Rudyard North) .
226	S 218 (4)	12-29-61	1.4 miles aggregate surfacing, plant mix bituminous and seal coat oiling . (39th Street - South of Missoula) .
	S 218 (5)	12-29-61	Traffic Controls (Brooks & Russell Street Intersection - South of Missoula) .
	S-US 220 (2)	12-29-61	1.2 miles grading, drainage, aggregate surfacing, plant mix bituminous and seal coat oiling . (Higgins Avenue Extension - South of Missoula) .
227	S 298 (2)	12-29-61	Traffic Controls . (Brooks Street & Second Avenue Intersection - South of Missoula) .
	S 328 (1)	12-29-61	1.2 miles grading, drainage, aggregate surfacing, road mix bituminous and seal coat oiling . Two prestressed concrete beam bridges, One 173 foot - West Fork Bitterroot River, One 198 foot - East Fork Bitterroot River . (South of Darby) .
228	S 368 (13)	7-30-62	0.6 mile grading, drainage, aggregate surfacing, plant mix bituminous and seal coat oiling . (Junction U. S. 2 - East of Glasgow - North) .
	S 368 (14)	7-30-62	1.4 miles aggregate surfacing, plant mix bituminous and seal coat oiling . (Junction U. S. 2 - East of Glasgow - South) .
229	S 73 (4)	8-1-62	8.4 miles grading, drainage, surfacing, plant mix bituminous and seal coat oiling . (East of Reserve) .
230	S 121 (3)	7-15-62	5.3 miles grading, drainage and aggregate surfacing . (Utica East).
231	S 136 (2) U 1	12-29-61	10.5 miles aggregate surfacing, plant mix bituminous and seal coat oiling . (Belfry South) .
233	S 167 (6)	7-15-62	5.0 miles grading, drainage, surfacing and bituminous surface treatment . (Northwest of Harrison) .
235	S 187 (8) U 1	12-29-61	10.6 miles minor grading, drainage, aggregate surfacing, plant mix bituminous and seal coat oiling . (From Junction Montana 19 Northwest) .
236	S 260 (3) U 1	12-29-61	11.4 miles aggregate surfacing and plant mix bituminous oiling . (Lodge Grass - West) .
237	S 50 (4)	12-29-61	8.0 miles grading, drainage and aggregate surfacing . (South of Hysham) .
240	S 291 (4)	12-29-61	6.3 miles grading, drainage, surfacing, plant mix bituminous and seal coat oiling . (Avon Northwesterly) .
	S 291 (6)	6-30-62	5.4 miles grading, cement stabilized base - drainage, plant mix bituminous and seal coat oiling . (Northwest of Avon) .
243	S 179 (4)	8-15-62	6.3 miles grading, drainage and aggregate surfacing . (Hogeland West) .
<u>OFF SYSTEM PROJECTS</u>			
301	FHP 2-A2, B2 & 12-A2 *	1961	7.2 miles grading and aggregate base . (Two Medicine Road & Approach - Northwest of East Glacier) .
302	NP 8-A2 *	1962	0.5 miles grading, drainage, surfacing and bituminous surfacing - One 160 foot concrete girder bridge - McDonald Creek . (In Glacier Park - North of West Glacier) .

* - - - Bureau of Public Roads Projects .



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PROJECTS UNDER CONTRACT

MONTANA HIGHWAY COMMISSION

SEPTEMBER 29, 1961 (Includes conflicts in September 27, 1961)

Map Index Number	Project Number	Probable Completion Date	LENGTH, TYPE OF CONSTRUCTION AND LOCATION
<u>FEDERAL AID INTERSTATE PROJECTS</u>			
1	I 15-1 (11) 37 U 1	9-30-62	7.8 miles grading, drainage, aggregate surfacing, plant mix bituminous and seal coat oiling. (U. S. 91 - South to North of Armstead) .
	I 15-1 (11) 37 U 2	6-30-62	Four prestressed concrete beam structures. One 143 foot - Red Rock River, One 107 foot - County Road Separation, One 153 foot - Horse Prairie Interchange. One 173 foot - Beaverhead River. (U. S. 91 - South to North of Armstead) .
2	I 15-1 (11) 37 U 3	12-29-61	7.8 miles fencing and cattle guards. (U. S. 91 - South to North of Armstead) .
	I 15-5 (13) 239 U 1	6-30-62	9.7 miles grading, drainage, aggregate surfacing, plant mix bituminous and seal coat oiling. Same construction on frontage road. (U. S. 91 - South to North of Cascade) .
	I 15-5 (13) 239 U 2	12-29-61	Four prestressed concrete beam structures, One 133 foot - Tintinger Interchange, One 82 foot - Frontage Road Separation, One 138 foot - South Cascade Interchange, One 123 foot - North Cascade Interchange. (U. S. 91 - South to North of Cascade) .
3	I 15-5 (13) 239 U 3	6-30-62	7.7 miles fencing. (U. S. 91 - South to North of Cascade) .
	I 94-4 (6) 136 U 1	9-15-62	11.6 miles grading, drainage, aggregate surfacing, Portland Cement paving, plant mix bituminous and seal coat oiling. Three 20 foot and two 10 foot concrete slab junior grade separations. One 168 foot prestressed concrete beam structure - Baker Road Interchange U. S. 12 (U. S. 10 - Miles City - East) .
	I 94-4 (6) 136 U 2	10-16-62	11.6 miles fencing. (U. S. 10 - Miles City - East) .
4	I 94-4 (5) 127 U 1	12-29-61	8.5 miles (0.8 miles four lane divided) grading, drainage, surfacing, Portland Cement paving, plant mix bituminous and seal coat oiling. One 214 foot prestressed concrete beam overpass - Radar Base Interchange. Three concrete slab junior grade separations. (U. S. 10 - Miles City West) .
	I 94-4 (5) 127 U 2	12-29-61	8.5 miles fencing. (U. S. 10 - Miles City - West) .
5	I 15-2 (14) 127 U 1	10-1-63	2.7 miles four lane divided, grading, drainage, aggregate surfacing, concrete paving, plant mix bituminous and seal coat oiling. (U. S. 91 - In Butte) .
	I 15-2 (14) 127 U 2	10-1-62	2.7 miles fencing. (U. S. 91 - In Butte) .
7	I 90-3 (8) 180 U 1	12-29-61	8.6 miles (1.0 mile four lane divided) grading, drainage, surfacing, plant mix bituminous and seal coat oiling. (U. S. 10 - North and South of Deer Lodge) .
	I 90-3 (8) 180 U 3	12-29-61	8.6 miles fencing. (U. S. 10 - North and South of Deer Lodge) .
	I 90-3 (10) 180	12-29-61	8.6 miles signing and delineation. (U. S. 10 - North and South of Deer Lodge) .
8	I-IG-ING 15-4 (4) 182 U 2	12-29-61	2.8 miles four lane divided, grading, drainage, surfacing, plant mix bituminous and seal coat oiling. Dual 260 foot steel girder bridges - Underpass - Colonial Club Interchange. (U. S. 91 - Helena - South) .
	I-IG-ING 15-4 (4) 182 U 3	12-29-61	2.8 miles fencing and cattle guards. (U. S. 91 - Helena - South) .
	I 15-4 (10) 182	12-29-61	2.8 miles signing and delineation. (U. S. 91 - Helena - South) .
	I-IG-ING 15-4 (4) 182 U 4	6-30-62	1.3 mile four lane divided, grading, drainage, aggregate surfacing, plant mix bituminous and seal coat oiling. (U. S. 91 - In Helena) .
	I 15-4 (5) 185 U 1	6-30-62	One 243 foot steel and concrete bridge - Underpass - Cedar Street Interchange. One 215 foot prestressed concrete beam bridge - Underpass - York Road Separation. (U. S. 91 - In Helena) .
	I-IG-ING 15-4 (4) 182 U 5	6-30-62	1.3 miles fencing and cattle guards. (U. S. 91 - In Helena) .
	I 15-4 (5) 185 U 2	6-30-62	One 558 foot - Riveted Plate Girder Bridge - Yellowstone River. (U. S. 10 - West of Columbus) .
9	I 90-8 (7) 394	12-29-61	0.7 miles (1.2 miles four lane divided) grading, drainage, surfacing, plant mix bituminous and seal coat oiling. One concrete slab junior grade separation. (U. S. 10 - North and South of Superior) .
11	I 90-1 (6) 43 U 1	12-29-61	6.7 miles fencing and cattle guards. (U. S. 91 - North and South of Superior) .
	I 90-1 (6) 43 U 3	12-29-61	6.7 miles signing and delineation. (U. S. 10 - North and South of Superior) .
12	I 90-7 (4) 330	12-29-61	730 foot - Dual Structures - Riveted Plate Girder Bridges - Yellowstone River. (U. S. 10 - South of Livingston) .
	I-IG 90-7 (9) 327 U 1	6-15-62	11.8 miles (11.0 miles four lane divided) grading, drainage, surfacing, plant mix bituminous and seal coat oiling. Construction of Irrigation and water supply facilities. (U. S. 10 - West and East of Livingston) .
	I-IG 90-7 (9) 327 U 2	12-29-61	Ten prestressed concrete beam structures. Dual 113 foot overpasses - West Interchange, Dual 251 foot overpasses - South Interchange, Dual Junior Grade Separation - Farm Road, Dual 128 foot overpasses, Swingly Interchange, One 219 foot underpass - East Interchange, One 210 foot Underpass - Mission Interchange. (U. S. 10 - West and East of Livingston) .
	I-IG 90-7 (9) 327 U 3	12-29-61	11.8 miles fencing and cattle guards. (U. S. 10 - West and East of Livingston) .
15	I 90-8 (10) 451	12-29-61	930 and 945 foot (dual) steel riveted plate girder bridges - Yellowstone River. (U. S. 10 - East of Billings) .
16	I 90-1 (7) 60 U 1	12-29-61	5.0 miles signing and delineation. (U. S. 10 - Southeast of Superior) .
17	I-IG 90-6 (2) 309 U 1	9-15-62	5.3 miles four lane divided, grading, drainage, aggregate surfacing, plant mix bituminous and seal coat oiling. Four prestressed concrete beam structures. Dual 113 foot overpasses - Bear Creek Interchange. Dual 128 foot overpasses - Trail Creek Interchange. Dual 335 foot steel and concrete overpasses - N.P. Ry. (U. S. 10 - East of Bozeman) .
	I-IG 90-6 (2) 309 U 2	9-15-62	5.3 miles fencing. (U. S. 10 - East of Bozeman) .
18	I 94-3 (3) 114 U 1 &	9-15-62	6.2 miles grading, drainage, aggregate surfacing, plant mix bituminous and seal coat oiling. (U. S. 10 - East of Forsyth) .
	I 94-4 (9) 119 U 1	9-15-62	6.2 miles grading, drainage, aggregate surfacing, plant mix bituminous and seal coat oiling. (U. S. 10 - East of Forsyth) .
	I 94-4 (3) 114 U 2	5-31-62	One 82 foot prestressed concrete beam bridge - Graveyard Creek. One 17 foot concrete slab, Junior grade separation - Stockpass. (U. S. 10 - East of Forsyth) .
	I 94-3 (3) 114 U 3 &	7-1-62	6.2 miles fencing. (U. S. 10 - East of Forsyth) .
	I 94-4 (9) 119 U 2	7-1-62	6.2 miles fencing. (U. S. 10 - East of Forsyth) .
19	I 90-8 (8) 438 U 2	12-29-61	6.4 miles fencing. (U. S. 10 - West of Billings) .
20	I 15-4 (9) 194 U 1	8-30-63	12.7 miles (7.7 miles four lane divided) grading, drainage, aggregate surfacing, plant mix bituminous and seal coat oiling. Dual 118 foot prestressed concrete beam overpasses - Gates of the Mountain Interchange. (U. S. 91 - North of Helena) .
	I 15-4 (9) 194 U 2	9-15-62	12.7 miles fencing and cattle guards. (U. S. 91 - North of Helena) .
21	I 94-4 (8) 120 U 1	9-15-62	7.3 miles grading, drainage, aggregate surfacing, plant mix bituminous and seal coat oiling. (U. S. 10 - West of Miles City) .
	I 94-4 (8) 120 U 2	5-31-62	One 173 foot prestressed concrete beam bridge - Underpass - Moon Creek Road Interchange. (U. S. 10 - West of Miles City) .
	I 94-4 (8) 120 U 3	5-31-62	7.3 miles fencing. (U. S. 10 - West of Miles City) .
<u>FEDERAL AID PRIMARY PROJECTS</u>			
101	FHP 60-A *	1961	8.9 miles grading, drainage, surfacing and bituminous surface treatment. One 260 foot prestressed concrete girder bridge - Madison River. (Montana 287 - South of Ennis) .
	ROW FHP 60-A *	12-29-61	8.9 miles fencing. (Montana 287 - South of Ennis) .
102	F-207 (8)	10-15-62	0.2 miles grading, drainage, aggregate surfacing, plant mix bituminous and seal coat oiling. (U. S. 10 - In Butte) .
	F-279 (4)	10-15-62	0.5 miles grading, drainage, aggregate surfacing, plant mix bituminous and seal coat oiling. (U. S. 10 Bypass - In Butte) .
103	AR 302-0061-05-012	11-30-61	Repair 120 foot concrete T beam bridge - Sage Creek. On F-132(6). (U. S. 2 - West of Havre) .
104	F-135 (17)	12-29-61	0.6 miles grading, drainage, surfacing, plant mix bituminous and seal coat oiling. (U. S. 10 - Miles City West) .
105	F-68 (11)	12-29-61	6.0 miles signing and delineation. (U. S. 10 A - Anaconda East) .
106	F-315 (15)	9-15-62	12.1 miles grading, drainage, aggregate surfacing. (Montana 24 - Southeast of Fort Peck) .
107	F-214 (3) U 1	12-29-61	1.0 miles grading, drainage, surfacing, plant mix bituminous and seal coat oiling. (U. S. 91 - In Helena) .
	F-214 (4)	12-29-61	0.7 miles signing and delineation. (U. S. 91 - Helena) .
	U-249 (14) U 1 &	7-31-62	0.5 miles four lane divided, grading, aggregate surfacing and Portland Cement concrete paving. One 206 foot prestressed concrete beam overpass - G. N. Ry. (U. S. 10 - Bypass - In Helena) .
	U-UG 376 (3) U 1	7-31-62	0.5 miles grading, drainage, aggregate surfacing, plant mix bituminous and seal coat oiling. (Montana 43 - West of Miles City) .
108	F-42 (1) U 1	8-31-62	9.3 miles grading, drainage, aggregate surfacing, plant mix bituminous and seal coat oiling. (Montana 43 - West of Miles City) .
	F-42 (1) U 2	7-31-62	One 215 foot prestressed concrete beam bridge - Big Hole River. (Montana 43 - West of Miles City) .
111	FHP 13-F6 *	1961	2.1 miles grading, drainage, and surfacing. (U. S. 2 - East of West Glacier) .
112	F 185 (6) U 1	6-15-62	0.3 miles grading, drainage, surfacing, plant mix bituminous and seal coat oiling. (U. S. 10 - West of Livingston) .
	F 185 (6) U 3	12-29-61	0.3 miles fencing. (U. S. 10 - West of Livingston) .

Map Index Number	Project Number	Probable Completion Date	LENGTH, TYPE OF CONSTRUCTION AND LOCATION
<u>FEDERAL AID PRIMARY PROJECTS</u>			
113	F 333 (29) U 1	12-29-61	11.8 miles cement base stabilizing, plant mix bituminous and seal coat oiling. (Montana 19 E - North of Grass Range) .
	F 26 (6) U 1 & F 333 (27) U 1	12-29-61	11.2 miles grading, cement stabilized base, drainage, surfacing, plant mix bituminous and seal coat oiling. (Montana 19 E - Grass Range North) .
	F 333 (27) U 2	12-29-61	Four prestressed concrete beam bridges. One 92 foot McDonald Creek, One 82 foot Chippewa Creek, One 92 foot Ford's Creek, One 82 foot Little Box Elder Creek. (Montana 19 E - Grass Range - North) .
114	FHP 6 D 5 *	1961	2.3 miles grading, drainage, surfacing, and road mix bituminous oiling. (U. S. 10 A relocation - West of Thompson Falls) .
117	NP 44A & 14A *	1961	10.9 miles grading, drainage, surfacing, and bituminous surface treatment. (Montana 17 - Northwest of East Glacier) .
118	FHP 20-B *	1961	9.4 miles grading, drainage, and four 60 foot concrete slab bridges. Three over Trail Creek and one over Ruby Creek (Montana 43 - West of Wisdom) .
119	U-F-FG 395 (4)	12-29-61	One 1126 foot steel riveted plate girder bridge - JW Ry and Missouri River. (U. S. 87 - Bypass - Great Falls North) .
123	F 191 (20) U 1	12-29-61	7.3 miles (2.5 miles grading and drainage) aggregate surfacing, plant mix bituminous and seal coat oiling. (U. S. 93 - North of Polson) .
125	F 235 (27) U 1	12-29-61	5.1 miles grading, drainage, aggregate surfacing, plant mix bituminous and seal coat oiling. Three 83 foot prestressed concrete beam bridges - Otter Creek. (U. S. 87 - Southeast of Belt) .
126	F 86 (20) U 1	9-15-62	0.8 miles grading, drainage, aggregate surfacing, plant mix bituminous and seal coat oiling. (U. S. 12 - East of Miles City) .
127	F 184 (14)	12-29-61	1.1 miles grading, drainage, surfacing, plant mix bituminous and seal coat oiling. (U. S. 10 - North and South of Deer Lodge) .
129	F 43 (15) U 1	12-29-61	31.0 miles plant mix bituminous and seal coat oiling. (Montana 43 - East and West of Ralston) .
130	FAP 215 (3)	12-29-61	Traffic controls on Brooks Street, Middlesex Street, and North Avenue Intersection. (U. S. 93 - In Missoula) .
	F-FU 215 (7)	6-30-63	0.3 miles four lane divided, grading, drainage, aggregate surfacing, plant mix bituminous and seal coat oiling. One 972 foot steel and concrete bridge - G.W.S.T.F.P.P Ry and Clark Fork (U. S. 93 - In Missoula) .
132	F 260 (9)	12-29-61	20,175 foot steel guard rail. (U. S. 2 - West Glacier East) .
134	F 156 (11) U 2	12-29-61	One 138 foot prestressed concrete beam bridge - Pumpkin Creek. (U. S. 212 - South of Miles City) .
135	F 103 (10) U 1 & F 333 (28) U1	7-15-62	11.5 miles grading, cement stabilized base surfacing, drainage, plant mix bituminous and seal coat oiling. Widen 57 & 75 foot treated timber bridges to 36 foot - Box Elder Creek. (Montana 19 - Roy Northeast) .
136	F 237 (16) & F 267 (11)	12-29-61	29.8 miles (Intermittent raising of grading) surfacing, plant mix bituminous and seal coat oiling. (Montana 20 - West & East of Ovando) .
138	FHP 42-M2 *	1962	2.2 miles grading, drainage, aggregate surfacing and bituminous surface treatment. Widening of 105 foot Reinforced Concrete Girder Bridge - Grayling Creek. (U. S. 191 - North of West Yellowstone) .
139	F 65 (8) U 2	12-29-61	One 60 foot prestressed concrete beam bridge - Greenfield South Canal. (U. S. 89 - Southeast of Fairfield) .
140	F 216 (9) U 1	6-30-62	9.2 miles grading, drainage, aggregate surfacing, plant mix bituminous and seal coat oiling. (Montana 20 S - West of Glenview) .
141	F 144 (6)	7-30-62	4.7 miles (2.3 miles four lane divided) grading, drainage, aggregate surfacing, plant mix bituminous and seal coat oiling. One 38 foot treated timber bridge - Goudy Coulee. (U. S. 2 - Glasgow East) .
142	F 156 (10) U 1 & F 156 (11) U1	9-15-62	13.2 miles grading, drainage, surfacing, plant mix bituminous surfacing. (U. S. 212 - Southeast of Miles City) .
144	F 180 (4) & U 277 (5)	12-29-61	3.2 miles minor grading, aggregate surfacing, plant mix bituminous and seal coat oiling. (U. S. 87 & 89 - In Great Falls) .
<u>FEDERAL AID SECONDARY PROJECTS</u>			
201	ROW S 6 (4)	10-1-62	0.3 mile fencing (North of Townsend) .
	S 6 (4)	9-15-62	7.0 miles grading, drainage, aggregate surfacing, plant mix bituminous and seal coat oiling. (North of Townsend) .
202	S-50 272 (2)	12-29-61	1.7 miles aggregate surfacing, plant mix bituminous and seal coat oiling. (Southeast of Frenchtown) .
203	S 258 (4)	10-1-62	7.8 miles grading, drainage and aggregate surfacing. (Junction Montana 20 East Van Norman South) .
204	S 32 (11)	12-29-61	7.4 miles grading, drainage, surfacing, plant mix bituminous and seal coat oiling. (Richey Northwest & Southeast) .
205	S 399 (2)	7-31-62	1.0 mile grading, drainage and aggregate surfacing. One 132 foot prestressed concrete beam bridge - Flatwillow Creek (North of Helena) .
207	S 7 (6) U 1	12-29-61	6.5 miles (1.9 miles four lane divided) grading, drainage, aggregate surfacing, plant mix bituminous and seal coat oiling. (East of Kallispell) .
209	S 65 (4)	12-29-61	4.9 miles grading, drainage, surfacing, plant mix bituminous and seal coat oiling. (Southeast of Big Fork) .
212	S 290 (12)	7-30-63	1.7 miles grading, drainage, aggregate surfacing, plant mix bituminous and seal coat oiling. One 708 foot riveted plate girder bridge - Missouri River. (Fort Benton Southeast) .
215	ERFD 40 (1) *	1961	3.8 miles grading. (Through Earthquake Slide - Southeast of Ennis) .
216	S 361 (10)	12-29-61	5.5 miles grading, drainage, surfacing, plant mix bituminous and seal coat oiling. (East of Girard) .
219	S 258 (3)	12-29-61	6.7 miles grading, drainage, and aggregate surfacing. (North of Rock Springs) .
224	FHP 5-2 (1) *	1961	4.7 miles grading and drainage. (South of Troy) .
225	S 13 (5)	12-29-61	5.3 miles grading, drainage, aggregate surfacing, plant mix bituminous and seal coat oiling. (Ruidyard North) .
226	S 218 (4)	12-29-61	1.4 miles aggregate surfacing, plant mix bituminous and seal coat oiling. (39th Street - South of Missoula) .
	S 218 (5)	12-29-61	Traffic Controls (Brooks & Russell Street Intersection - South of Missoula) .
	S-US 220 (2)	12-29-61	1.2 miles grading, drainage, aggregate surfacing, plant mix bituminous and seal coat oiling. (Higgins Avenue Extension - South of Missoula) .
	S 298 (2)	12-29-61	Traffic Controls. (Brooks Street & Second Avenue Intersection - South of Missoula) .
227	S 328 (1)	12-29-61	1.2 miles grading, drainage, aggregate surfacing, road mix bituminous and seal coat oiling. Two prestressed concrete beam bridges, One 173 foot - West Fork Bitterroot River, One 198 foot - East Fork Bitterroot River. (South of Derby) .
228	S 368 (13)	7-30-62	0.6 mile grading, drainage, aggregate surfacing, plant mix bituminous and seal coat oiling. (Junction U. S. 2 - East of Glasgow - North) .
	S 368 (14)	7-30-62	1.4 miles aggregate surfacing, plant mix bituminous and seal coat oiling. (Junction U. S. 2 - East of Glasgow - South) .
229	S 73 (4)	8-1-62	8.4 miles grading, drainage, surfacing, plant mix bituminous and seal coat oiling. (East of Reserve) .
230	S 121 (3)	7-15-62	5.3 miles grading, drainage and aggregate surfacing. (Utica East).
231	S 136 (2) U 1	12-29-61	10.5 miles aggregate surfacing, plant mix bituminous and seal coat oiling. (Belfry South) .
233	S 167 (6)	7-15-62	5.0 miles grading, drainage, surfacing and bituminous surface treatment. (Northwest of Harrison) .
235	S 187 (8) U 1	12-29-61	10.6 miles minor grading, drainage, aggregate surfacing, plant mix bituminous and seal coat oiling. (From Junction Montana 19 Northwest) .
236	S 260 (3) U 1	12-29-61	11.4 miles aggregate surfacing and plant mix bituminous oiling. (Lodge Grass - West) .
237	S 50 (4)	12-29-61	8.0 miles grading, drainage and aggregate surfacing. (South of Hysham) .
240	S 291 (4)	12-29-61	6.3 miles grading, drainage, surfacing, plant mix bituminous and seal coat oiling. (Avon Northwesterly) .
	S 291 (6)	6-30-62	5.4 miles grading, cement stabilized base - drainage, plant mix bituminous and seal coat oiling. (Northwest of Avon) .
243	S 179 (4)	8-15-62	6.3 miles grading, drainage and aggregate surfacing. (Hogeland West) .
<u>OFF SYSTEM PROJECTS</u>			
301	FHP 2-A2, B2 & 12-A2 *	1961	7.2 miles grading and aggregate base. (Two Medicine Road & Approach - Northwest of East Glacier) .
302	NP 8-A2 *	1962	0.5 miles grading, drainage, surfacing and bituminous surfacing - One 160 foot concrete girder bridge - McDonald Creek. (In Olacier Park - North of West Glacier) .

* - - - Bureau of Public Roads Projects .

ESSENTIALS OF GOOD SUPERVISION

Training-in-Service Department

How a Good Supervisor Handles Disciplinary Problems Effectively

When faced with a situation that needs to be corrected, he attacks the problem calmly and logically.

1. *He Lets the Employee Know What is Expected of Him*

By keeping the employee properly informed of requirements concerning performance of duties and responsibilities.

By advising the employee on rules of conduct which he would not otherwise be expected to know.

2. *He Tries, If Possible, to Save the Erring Employee*

By keeping in touch with employees, especially those having difficulty.

By finding out not only *what* happened, but *why* it happened, when an employee has done something wrong. Above all, he gives the employee the right to be heard.

By attempting to help the employee to improve his performance, his conduct or both. He takes disciplinary action as the "last resort," not the first. Wise supervision can save many a problem employee.

3. *When the Employee Fails to Respond*

The good supervisor begins by gathering evidence in the event drastic action becomes necessary.

He realizes that statements not recorded may often be forgotten; documents not saved or recorded may become unavailable; specific problems may be forgotten or become unprovable if the evidence is not obtained and recorded close to the time of the occurrence.

He does not keep the matter from the employee; as this will not help him to reform.

4. *He Realizes Prompt Action is Necessary*

He knows, when it becomes evident that the employee will not or cannot improve,

that it will probably become necessary to take prompt and appropriate disciplinary action.

He is always prepared to present sufficient evidence, through pertinent documents to prove the charges are well founded.

5. *After It Is Over, the Good Supervisor*

Tries to make use of the experience.

Tries to figure out *why* it happened and *how* it might have been prevented.

Realizes management may often learn something of value, something that may help prevent a recurrence.

6. *He Continually Asks Himself*

Which one of the following may have been the reason:

1. Sheer orneriness on the part of the employee.
2. Faulty recruitment or possible ill-advised placement.
3. Inadequate training.
4. Failure to create a good working atmosphere.
5. Failure to motivate the employee.
6. A communications breakdown.
7. Inability to detect early danger signals.
8. Indifference.
9. Excessive tolerance of poor conduct or attitudes.
10. A lack of foresight.
11. A lack of understanding.

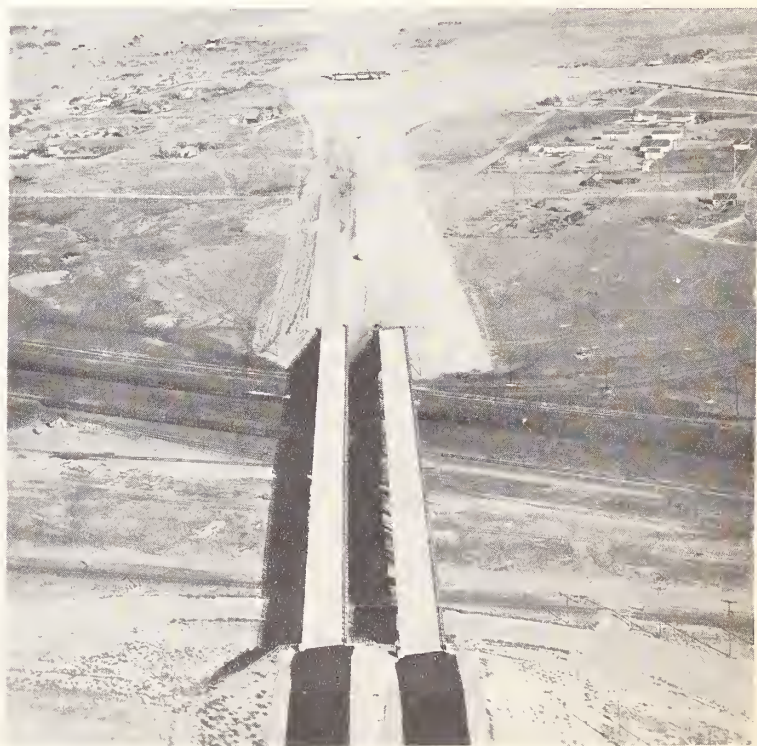
7. *The Good Supervisor Always Remembers*

In maintaining a well-disciplined organization the most important factors are the day-to-day supervisor-employee relations which he establishes on the job. He realizes it is an integral part of his regular job—*not* something added.

He also realizes that by adequately orienting employees, helping them to understand their place in the entire organization, and their job; the requirements they must meet, is only arrived at by giving them *positive* leadership; and by setting the kind of example of personal and official behavior you will wish them to follow. He knows that only by this can he greatly reduce the need for corrective discipline.



True western tradition was adhered to in the dedication of the new section of Interstate 94 west of Miles City. From Indians to the Commander of the nearby Radar base were in attendance as Commission Chairman Roy Sorrells and Highway Engineer Quinnell used dehorning shears to cut the lariat rope and officially open this new concrete highway.



Traffic is now using the overpass taking U.S. 12 over Interstate 15 at the eastern outskirts of Helena. Plant mix surfacing is rapidly nearing completion on this 3-mile section, under contract to Hilde Construction Co., and Birch Construction Co. has nearly completed the raising of the grade to the top of the north end of the railroad overpass.



Interstate 15 is beginning to take shape as it swings around Cascade



The Butte urban section of Interstate Highway will occupy the vacant space extending through the center of this photo. The contract was awarded to Bud King last month, and upon completion, the four-lane concrete road should add much to the Mining City.

NINE LESSONS IN LIVING

Learn to laugh—a laugh is better than medicine.
Learn to attend to your own business. Few men
can handle their own well.

Learn to tell a story. A well-told story is like a
sunbeam in a sick room.

Learn to say kind things—nobody ever resents
them.

Learn to avoid nasty remarks—they give neither
the hearer nor the speaker any lasting satis-
faction.

Learn to stop grumbling. If you can't see any
good in the world, keep the bad to yourself.

Learn to hide aches with a smile—nobody is in-
terested.

Learn to keep troubles to yourself—nobody wants
to take them from you.

Above all, learn to smile. It pays.



IMPROVEMENT NOTED IN FLAGGING PROCEDURES. We can't blame the motorists for stopping when this lovely lady, Sherry O'Brien, holds the stop sign up to halt traffic. Sherry is employed by the LaLonde Company. This picture was taken on the Fairview-Girard Project, but we understand that she is now working on the Glendive-Circle Project just outside of Glendive.

The Center Line
STATE HIGHWAY DEPARTMENT
Helena, Montana



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